REMARKS

This amendment is intended as a full and complete response to the Final Office dated, March 16, 2004. In the Office Action, the Examiner notes that claims 1-20 are pending, of which claims 1-20 stand rejected. By this amendment, claims 2, 17, and 19 are amended, whiles claims 2-16, 18, and 20 continue unamended.

In view of both the amendments presented above and the following discussion, the applicants submit that none of the claims now pending in the application are anticipated or obvious under the respective provisions of 35 U.S.C. §102 and §103. Thus, the applicants believe that all claims are now in allowable form.

REJECTIONS

A. 35 U.S.C. §102 Claims 1-5 and 9-12, 15, 17, and 19

The Examiner has rejected claim I, 5, 9-12, 15, 17, and 19 as being anticipated under 35 U.S.C. §102 by Goldsmith et al. (U.S. Patent No. 5,491,800 issued February 13, 1996, herein after "Goldsmith"). The applicants respectively traverse the rejection.

The applicants have amended independent claims 1, 17, and 19 to further clarify the features that the applicants consider as being inventive. In particular, the Applicants note that a packet cannot have source and destination nodes. Rather, a packet of the present invention contains source and destination addresses. Thus, claims 1, 17, and 19 have been amended to clarify and particularly point out the features of the invention.

For example, independent claim 1, as amended, (and similarly, independent claims 17 and 19) recites:

> "An application programming interface (API) for network applications capable of processing packets having source and destination node addresses different from a node where the application runs, said API comprising:
>
> first and second data structures associated with a network interface in communication with a network, said first and second data structures being mapped to an operating system and a network application, said network interface, operating system, and network application residing at a node capable of processing packets having

source and destination node addresses different from said node where the application runs, wherein:

packets to be passed from the operating system to the network application are stored in a buffer and referenced via respective pointers within said first data structure, said first data structure pointers being inserted into said first data structure by said operating system prior to network layer processing, said first data structure pointers being removed by said network application, insertion and removal of said first data structure pointers being asynchronous with respect to each other; and

packets to be processed as received packets by said network layer of said operating system are stored in a buffer and referenced via respective pointers within said second data structure, said second data structure pointers being inserted into said second data structure by said network application, said second data structure pointers being removed by said operating system, insertion and removal of said second data structure pointers being asynchronous with respect to each other." (Emphasis Added).

"Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim" (Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co., 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984)(citing Connell v. Sears, Roebuck & Co., 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983)) (emphasis added). The Goldsmith reference fails to disclose each and every element of the claimed invention, as arranged in the claim.

In particular, the Goldsmith reference discloses a client-server system 100 comprising a collection of client nodes 102 that communicate over a network 104 with various server nodes 106. Nodes coupled to the network typically communicate by exchanging discrete packets of data according to predefined protocols. A series of hardware and software layers within each node interact to format data for transfer between nodes that are communicating over the network. (See, col. 1, lines 26-63).

Goldsmith further discloses that each of the client and server nodes include a processor and a memory, the memory having an operating system and an application program stored therein for controlling the operations of the processor, each of the op rating systems including a dynamically configured protocol stack where, a servic

request is issued at a client application of the client node, the service request including an access-point address of a client dynamically figured protocol stack and appending a remote address to the service request at the client dynamic configured protocol stack and transmitting the service request over the communication. Goldsmith also discloses that each of the client and server nodes incorporate CSF interfaces and NSF interfaces. These interfaces are object-orientated programs that are accessed by application programs when invoking, transporting and responding to RPC service requests at the client and server nodes (see Goldsmith, col. 10, lines 13-20).

Nowhere in the Goldsmith reference is their any teaching of a "first and second data structures associated with a network interface in communication with a network, said first and second data structures being mapped to an operating system and a network application, said network interface, operating system, and network application residing at a node capable of processing packets having source and destination node addresses different from said node where the application runs."

Specifically, the applicants' invention provides an application programming interface (API) for network applications capable of processing packets having source and destination node addresses different from a node where the application runs. That is, the node facilitating the API of the present invention is a node that is linked but unassociated with the source and destination nodes in a network. The network interface, operating system, and network application recited in the applicants' invention in claim 1 are associated with such intermediate node between the source and destination nodes of the network, as opposed to the operating system and network applications that are associated with either the client or server nodes (i.e., source and/or destination nodes) of the client server network of Goldsmith.

Goldsmith clearly discusses that "referring first to the client node 610, an application program 612 and an operating system 620 control and coordinate the operations of the node 610. ... The CSF interface 630 is primarily incorporated within the operating system 620; however, a portion of that interface is created in the application program 612 when invoking RPC service requests and establishing a

transport mechanism for communication with server node 650 ... ." (see Goldsmith, col. 10, lines 19-35). In other words, the network interface, operating system and network application runs at the client (i.e., source) nodes and server (i.e., destination) nodes.

Therefore, the Goldsmith reference fails to teach each and every element of the claimed invention as arranged in the claim, since the Goldsmith reference fails to teach or suggest "first and second data structures associated with a network interface in communication with a network, said first and second data structures being mapped to an operating system and a network application, said network interface, operating system, and network application residing at a node capable of processing packets having source and destination node addresses different from said node where the application runs. That is, Goldsmith discloses the network interface, operating system and network application run at the source nodes and destination nodes, as opposed to the Applicant's invention, which claims that the network interface, operating system, and network application residing at a node capable of processing packets having source and destination node addresses different from said node where the application runs.

More specifically, to the extent that the Goldsmith reference utilizes intermediate nodes between a server node and a client node, there is no processing of the transferred data other than forwarding the data. By contrast, the present invention, as claimed, clearly indicates that one or more intermediate nodes (i.e., non client or server nodes) perform additional processing, which include:

> "packets to be passed from the operating system to the network application are stored in a buffer and referenced via respective pointers within said first data structure, said first data structure pointers being inserted into said first data structure by said operating system prior to network layer processing, said first data structure pointers being removed by said network application, insertion and removal of said first data structure pointers being asynchronous with respect to each other; and
>
> packets to be processed as received packets by said network layer of said operating system are stored in a buffer and referenced via respective pointers within said second data structure, said second data structure pointers being inserted into said second data structure by said network application, said second data structure pointers being removed by said operating system, insertion and

removal of said second data structure pointers being asynchronous with respect to each other."

Thus, the Goldsmith reference fails to teach the claimed feature of the "first and second data structures associated with a network interface in communication with a network, said first and second data structures being mapped to an operating system and a network application, said network interface, operating system, and network application residing at a node capable of processing packets having source and destination node addresses different from said node where the application runs." Therefore, the Goldsmith reference fails to teach each and every element of the claimed invention, as arranged in the claim.

As such, the applicants submit that independent claim 1 is not anticipated and fully satisfies the requirements under 35 U.S.C. §102 and is patentable thereunder. Furthermore, independent claims 17 and 19 recite similar limitations as recited claim1. As such, and at least for the same reasons discussed above, the applicants submit that independent claim 17 and 19 are also not anticipated by the Goldsmith reference and fully satisfy the requirements under 35 U.S.C.§102 are patentable thereunder. Moreover, claims 5, 9-12, and 15 depend from independent claim 1 and recite additional features thereof. As such and at least for the same reasons as discussed above, the applicants submit that these dependent claims are also not anticipated and fully satisfy the requirements under 35 U.S.C.§102 and are patentable thereunder. Therefore, the applicants respectfully request that the objections be withdrawn.

B 35 U.S.C. §103 Claims 2-4, 6-8, 13, 14, 16, 18, and 20

The Examiner is rejecting claims 2-4, 6-8, 12, 14, 16, 18, and 20 as being obvious under 35 U.S.C.§103 over Goldsmith in view of Northrup et al. (U.S. Patent No. 6,546,413, issued April 8, 2003, hereinafter "Northrup"). The applicants respectfully transverse the rejection. Figure 2 depends from independent claim 1 and recites additional features thereof. In particular, dependent claim 2 recites in part:

> "An application programming interface (API) for network applications capable of processing packets having source and destination node addresses different from a node where the application runs, said API comprising:
>
> first and second data structures associated with a network interface in communication with a network, said first and second data structures being mapped to an operating system and a network application, said network interface, operating system, and network application residing at a node capable of processing packets having source and destination node addresses different from said node where the application runs, wherein:
>
> packets to be passed from the operating system to the network application are stored in a buffer and referenced via respective pointers within said first data structure, said first data structure pointers being inserted into said first data structure by said operating system prior to network layer processing, said first data structure pointers being removed by said network application, insertion and removal of said first data structure pointers being asynchronous with respect to each other; and
>
> packets to be processed as received packets by said network layer of said operating system are stored in a buffer and referenced via respective pointers within said second data structure, said second data structure pointers being inserted into said second data structure by said network application, said second data structure pointers being removed by said operating system, insertion and removal of said second data structure pointers being asynchronous with respect to each other." (Emphasis Added).

The test under 35 U.S.C. § 103 is not whether an improvement or a use set forth in a patent would have been obvious or non-obvious; rather the test is whether the claimed invention, considered as a whole, would have been obvious. Jones v. Hardy, 110 USPQ 1021, 1024 (Fed. Cir. 1984) (emphasis added). Thus, it is impermissible to focus either on the "gist" or "core" of the invention, Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc., 230 USPQ 416, 420 (Fed. Cir. 1986) (emphasis added). Moreover, the invention as a whole is not restricted to the specific subject matter claimed, but also embraces its properties and the problem it solves. In re Wright, 6 USPQ 2d 1959, 1961 (Fed. Cir. 1988) (emphasis added). The combination of Goldsmith and Northrup fails to t ach the applicants Invention as a whole.

As discussed above, the Goldsmith reference fails to teach or suggest the applicants' invention. In particular, the Goldsmith merely discloses each of the client and server nodes incorporate CSF interfaces and NSF interfaces. These interfaces are object-orientated programs that are accessed by application programs when invoking, transporting and responding to RPC service requests at the client and server nodes (see Goldsmith, col. 10, lines 13-20). These CSF and NSF interfaces are located at the client (i.e., source) and server (i.e., destination) nodes. Nowhere in the Goldsmith is their any teaching or suggestion of "first and second data structures associated with a network interface in communication with a network, said first and second data structures being mapped to an operating system and a network application, said network interface, operating system, and network application residing at a node capable of processing packets having source and destination node addresses different from said node where the application runs."

Furthermore, the Northrup reference fails to bridge a substantial gap as between the Goldsmith reference and the applicants' invention. In particular, the Northrup reference discloses "1) locate the requested service and complain if it cannot be found; otherwise establish a thread communication link for this communication point (allocates memory and initializes) and record the location of the Minor Service communication point. 2) If the Minor Service communication point has the capability to send: a) locate the communication primitive used by the Minor Service to send; b) create an instance of the communication primitive (allocate memory and initialize). This is accomplished by executing the communication primitive's CREATE operation." (see Northrup, col. 31, lines 39-51).

Even if the two references could somehow be operably combined, the combination would merely disclose issuing a service request at a client application of a client node, where the service request includes an access-point address and appending a remote address to the service request, and communication primitives are built using the underlying computer operating system intraprocess and interprocess communication facilities and thus are operating system-specific. (See, Northrup, col. 4,

lines 18-21). Thus, the combined references are completely different from the applicants' invention, since the references fail to teach or suggest "first and second data structures associated with a network interface in communication with a network, said first and second data structures being mapped to an operating system and a network application, said network interface, operating system, and network application residing at a node capable of processing packets having source and destination nodes different from said node where the application runs." Therefore, the combination of Goldsmith and Northrup fail to teach or suggest the applicants' invention as a whole.

As such, the applicants submit that dependent claim 2 is not obvious and fully satisfies the requirement under 35 U.S.C. §103 and is patentable thereunder. Furthermore, pending claim 3-4, 6-8, 13, 14, 16, 18, and 20 recite similar features as recited in dependent claim 2. As such and at least for the same reasons as discussed above, the applicants submit that these dependent claims are also not obvious and fully satisfy the requirement under 35 U.S.C. §103 and are patentable thereunder. Therefore, the applicants respectfully request that the rejections be withdrawn.

CONCLUSION

Thus, the applicants submit that claims 1-20 in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, it is requested that the Examiner telephone Mr. Steven Hertzberg or Mr. Eamon Wall, telephone number (732) 530-9404, so that appropriate arrangements may be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

E J Wall

4/17/04

Eamon J. Wall, Attorney
Reg. No. 39,414
(732) 530-9404

Moser, Patterson & Sheridan, LLP
595 Shrewsbury Avenue, First Floor
Shrewsbury, New Jersey 07702